AMENDMENTS TO THE CLAIMS

1. (currently amended) **A method of** ~~Use of an inhibitor of a PDE enzyme for the preparation of a medicament for~~ stimulating ovarian follicular growth in a female **comprising administering to a female in need thereof a composition comprising a PDE inhibitor**.

2. (currently amended) **The method of** ~~Use according to~~ claim 1, wherein the **female** ~~patient~~ is undergoing ovulation induction.

3. (currently amended) **The method of** ~~Use according to~~ claim 1 ~~or claim 2~~, wherein the **female** ~~patient~~ is undergoing controlled ovarian hyperstimulation.

4. (currently amended) **The method of** ~~Use according to~~ claim 1~~, 2 or 3~~, wherein the **composition** ~~medicament~~ is **administered in combination** ~~for simultaneous separate or sequential administration~~ with FSH, or an agent having FSH activity, or an agent that stimulates endogenous FSH release.

5.-6. (cancelled)

7. (currently amended) **The method of claim 1** ~~Use according to any one preceding claim~~, wherein the **composition** ~~medicament~~ is administered starting at ~~or about~~ day 2 to 3 after menses.

8. (currently amended) **The method of claim 1** ~~Use according to any one preceding claim~~, wherein ~~the medicament is administered daily until follicular growth is sufficient, when~~ an ovulation triggering dose of hCG is administered **after follicular growth**.

9. (currently amended) **The method of claim 8** ~~Use according to claim 8~~, wherein the ovulation triggering dose of hCG is 5,000-10,000 IU.

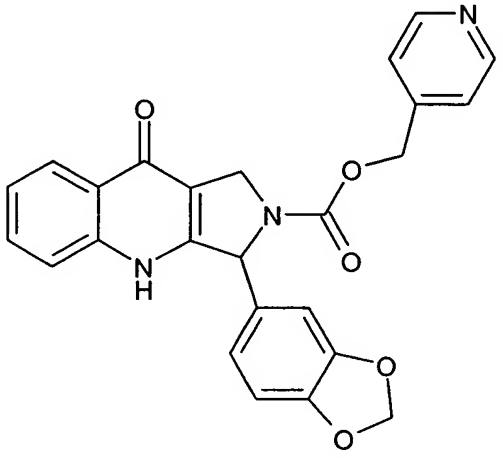
10. (currently amended) **The method of claim 4** ~~Use according to any one preceding claim, wherein the medicament is administered with FSH, and~~ wherein the dose of FSH is less than the dose required in the same patient in the absence of the PDE inhibitor, in order to

achieve the same result in terms of follicular growth.

11. (currently amended) **The method of claim 1** ~~Use according to any one preceding claim~~, wherein the PDE inhibitor is an inhibitor of at least one PDE type selected from **the group consisting of** 1, 5 and 6.

12. (currently amended) **The method of claim 1** ~~Use according to any one preceding claim~~, wherein the PDE inhibitor is selected from **the group consisting of**: 5-[2-ethoxy-5-(4-methyl-1 -piperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one (sildenafil); Zaprinast; dipyridamole; 5-(2-ethoxy-5-morpholinoacetylphenyl)-1 -methyl-3-n-propyl-1,6-dihydro-7H-20 pyrazolo[4,3-d]pyrimidin-7-one; 3-ethyl-5-[5-(4-ethylpiperazin- 1 -ylsulphonyl)-2-n-propoxyphenyl]-2-(pyr- idin-2-yl) methyl-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; 3-ethyl-5-[5-(4-ethylpiperazin-1-ylsulphonyl)-2-(2-methoxyethoxy)pyridi- n-3-yl]-2-(pyridin-2-yl) methyl-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; (+)-3-ethyl-5-[5-(4-ethylpiperazin-1-ylsulphonyl)-2-(2-methoxy-1(R)-methylethoxy)pyridin-3-yl]-2-methyl-2,6-dihydro-7 H-pyrazolo[4 ,3-d] pyrimidin-7-one; 5-[2-ethoxy-5-(4-ethylpiperazin-1-ylsulphonyl)pyridin-3-yl]-3-ethyl-2-[2-methoxyethyl]-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; 5-[2-iso-butoxy-5-(4-ethylpiperazin-1-ylsulphonyl)pyridin-3-yl]-3-ethyl-2-(1-methylpiperidin-4-yl)-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; 5-[2-ethoxy-5-(4-ethylpiperazin-1 -ylsulphonyl)pyridin-3-yl]-3-ethyl-2-phenyl-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; 5-(5-acetyl-2-propoxy-3-pyridinyl)-3-ethyl-2-(1 -isopropyl-3-azetidinyl)-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one; 5-(5-acetyl-2-butoxy-3-pyridinyl)-3-ethyl-2-(1-ethyl-3-azetidinyl)-2 ,6-dihydro-7H-pyrazolo [4,3-d]pyrimidin-7-one; (6R, 12aR)-2,3,6,7,12,12a-hexahydro-2-methyl-6-(- 3,4-methylenedioxyphenyl)pyrazino[2',1 ':6,1]pyrido[3,4-b]indole-1,4-dione (Tadalafil; IC-351); 2-[2-ethoxy-5-(4-ethyl-piperazin-1-yl-1-sulphonyl)-phenyl]-5-methyl-7-propyl-3H-imidazo [5,1 -f][1,2,4]triazin-4-one (vardenafil); 4-bromo-5-(pyridylmethylamino)-6-[3-(4-chlorophenyl)-propoxy]-3(2H)pyridazinone; 1 -[4-[(1,3-benzodioxol-5-ylmethyl)amiono]-6-chloro-2-quinozolinyl]-4-piperidine-carboxylic acid, monosodium salt; (+)-cis-5,6a,7,9,9,9a-hexahydro-2-[4-(trifluoromethyl)-phenylmethyl-5-methyl-cyclopent-[4,5]imidazo[2,1-b]purin-4(3H)one; furaziocillin; cis-2-hexyl-5-methyl-3,4,5,6a,7,8,9,9a-octahydrocyclopent[4,5]-imidazo[2- ,1 -b]purin-4-one; 3-acetyl-1-(2-chlorobenzyl)-2-propylindole-6- carboxylate; 3-acetyl-1 -(2-

chlorobenzyl)-2-propylindole-6-carboxylate; 4-bromo-5-(3-pyridylmethylamino)-6-(3-(4-chlorophenyl)propoxy)-3-(2H) pyridazinone; 1-methyl-5(5-morpholinoacetyl-2-n-propoxyphenyl)-3-n-propyl-1,6-dihydro- 7H-pyrazolo (4,3-d)pyrimidin-7-one; 1 -[4-[(1,3-benzodioxol-5-yl methyl)amino]-6-chloro-2-quinazolinyl]-4-piperidinecarboxylic acid, monosodium salt; Pharmaprojects No. 4516; Pharmaprojects No. 5051; Pharmaprojects No. 5064; Pharmaprojects No. 5069; GF-196960; E-8010 and E-4010; Bay-38-3045 & Bay-38-9456; Vinpocetine; SCH-51866; SCH-59498; (6a*R*,9a*S*)-2-(Biphenylylmethyl)-5,6a,7,8,9,9a-hexahydro-5-methyl-3(phenylmethyl)cyclopent [4,5] imidazo-[2,1-*b*]purin-4(3*H*)-one; 5'-Methyl-2'(biphenylylmethyl)-3'-(phenylmethyl) spiro[cyclopentane-1,7'(8'*H*)-[3*H*]imidazo[2,1-*b*]purin]-4(5'*H*)-one; (6a*R*,9a*S*)-5,6a,7,8,9,9a-Hexahydro-5-methyl-2-(phenylethynyl)-3-(phenylmethyl)cyclopent [4,5] imidazo[2,1-*b*]-purin-4(3*H*)-one; dipyridamole, AWD-12-171 and AWD-12-217; BMS-341400; UK-343,664; 5E-3623, 5E-3569, 5E-3657, E4021; KS-505a; YC-1; IDDB reference number 323951; WIN-61691; FR226807; IDDB references 461317, 462503, 461321, 461324, 466146; **and** pyridine-4-ylmethyl 3-(1,3-benzodioxol-5-yl)-9-oxo-1,3,4,9 tetrahydro-2H-pyrrolo [3,4-b] quinoline-2-carboxylate:



13. (currently amended) **The method of claim 1** ~~**Use according to any one preceding claim**~~, wherein the PDE inhibitor is selected from **the group consisting of** Sildenafil; Zaprinast; Dipyridamole ;(6aR, 9aS)-2- (Biphenylylmethyl)-5, 6a, 7,8, 9,9a- hexahydro-5-methyl-3 (phenylmethyl) cyclopent [4,5]imidazo- [2, 1-b] purin-4 (3H)- one; and 5'-Methyl-

2'(biphenylylmethyl)-3'-(phenylmethyl) spiro [cyclopentane-1,7' (8'7y)- [3 imidazo [2,1-b] purin] -4 (5'H)-one.

14. (currently amended) **The method of claim 1** ~~Use according to any one of claims 1 to 11~~, wherein the PDE inhibitor is Zaprinast.

15. (currently amended) **The method of claim 1** ~~Use according to any one of claims 1 to 11~~, wherein the PDE inhibitor is Sildenafil.

16. (currently amended) **The method of claim 1** ~~Use according to any one of claims 1 to11~~, wherein the PDE inhibitor is Tadalafil.

17. (currently amended) **The method of claim 1** ~~Use according to any one of claims 1 to 11~~, wherein the PDE inhibitor is a selective inhibitor of PDE 1 and PDE 5.

18. (currently amended) **The method of claim 1** ~~Use according to any one of claims 1 to 11~~, wherein the PDE inhibitor is a selective inhibitor of PDE 1.

19. (currently amended) **The method of claim 1** ~~Use according to any one of claims 1 to 11~~, wherein the PDE inhibitor is a selective inhibitor of PDE 5.

20. (cancelled)

21. (original) A method of increasing oocyte maturation comprising treating an oocyte *in vitro* with a composition comprising a PDE inhibitor in an amount effective to cause oocyte maturation.

22. (currently amended) **The method of claim 21** ~~A method according to claim 20 or 21~~, wherein the composition comprises at least one PDE 4 inhibitor.

23. (currently amended) **The method of claim 21** ~~A method according to claim 20 or 21~~, wherein the composition comprises at least one PDE 4 inhibitor selected from the group

consisting of Piclamilast, Roflumilast, Ariflo, Filaminast, Mesopram, D4418, Arofylline, and CL1044.

24. (currently amended) **The method of claim 21** ~~**A method according to claim 20 or 21**~~, wherein the composition comprises at least one PDE 4 inhibitor and **a second** ~~**one other**~~ PDE inhibitor selected from the group consisting of a PDE 1 inhibitor, a PDE 7 inhibitor, a PDE 9 inhibitor, a PDE 10 inhibitor, and a PDE 11 inhibitor.

25. (currently amended) **The method of claim 21** ~~**A method according to claim 20 or 21**~~, wherein the method further comprises **treating the oocyte** ~~**treatment**~~ with at least one gonadotropin selected from the group consisting of FSH, luteinizing hormone, and chorionic gonadotropin.

26. (currently amended) **The method of claim 22** ~~**A method according to claim 22**~~, wherein the method further comprises **treating the oocyte** ~~**treatment**~~ with at least one gonadotropin selected from the group consisting of FSH, luteinizing hormone, and chorionic gonadotropin.

27. (currently amended) **The method of claim 23** ~~**A method according to claim 23**~~, wherein the method further comprises **treating the oocyte** ~~**treatment**~~ with at least one gonadotropin selected from the group consisting of FSH, luteinizing hormone, and chorionic gonadotropin.

28. (currently amended) **The method of claim 24** ~~**A method according to claim 24**~~, wherein the method further comprises **treating the oocyte** ~~**treatment**~~ with at least one gonadotropin selected from the group consisting of FSH, luteinizing hormone, and chorionic gonadotropin.

29. (currently amended) **The method of claim 21** ~~**A method according to claim 20 or 21**~~, wherein the method further comprises **treating the oocyte** ~~**treatment**~~ with FSH.

30. (currently amended) **The method of claim 21** ~~**A method according to claim 20 or 21**~~,

wherein the method further comprises **treating the oocyte with** ~~administering~~ FSH and at least one non-FSH gonadotropin hormone.

31. (currently amended) **The method of claim 30** ~~A method according to claim 30~~, wherein the non-FSH gonadotropin hormone is luteinizing hormone.

32. (currently amended) **The method of claim 30** ~~A method according to claim 30~~, wherein the non-FSH gonadotropin hormone is chorionic gonadotropin.

33. (currently amended) **The method of claim 21** ~~A method according to claim 20 or 21~~, wherein the method **further** comprises administering a stimulator, agonist or adjuvant of FSH alone **or** in combination with a PDE 4 inhibitor.

34. (currently amended) **The method of claim 33** ~~A method according to claim 33~~, wherein the stimulator of FSH is selected from the group consisting of Letrozole, Anastrozole, and Vorozole.

35. (currently amended) **The method of claim 25** ~~A method according to claim 25~~, wherein the PDE inhibitor and the gonadotropin hormone are administered concurrently.

36. (currently amended) **The method of claim 25** ~~A method according to claim 25~~, wherein the PDE 4 inhibitor and FSH are contained in a single ~~vial as a~~ mixture.

37. (currently amended) A vial containing a single dose of a mixture **comprising** ~~of~~ **a** PDE 4 inhibitor and FSH.

38. (currently amended) **The method of claim 25** ~~A method according to claim 25~~, wherein the PDE inhibitor is administered prior to the gonadotropin hormone treatment.

39. (currently amended) **The method of claim 25** ~~A method according to claim 25~~, wherein the PDE inhibitor is administered after the gonadotropin hormone treatment.

40. (currently amended) **The method of claim 25** ~~**A method according to claim 25**~~, wherein the FSH is administered at a dosage range of ~~**about**~~ 5 to 450 IU/day.

41. (currently amended) **The method of claim 25** ~~**A method according to claim 25**~~, wherein the FSH is administered at a dosage range of about 5 to 75 IU/day.

42. (currently amended) **The method of claim 1** ~~**A method according to claim 20**~~, wherein the method comprises administering to the female a composition comprising at least one PDE 4 inhibitor and an exogenous FSH hormone.

43. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the exogenous FSH hormone is a recombinant FSH hormone.

44. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the exogenous FSH hormone is urinary FSH hormone.

45. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the PDE 4 inhibitor is administered **at** ~~**in**~~ a dose of ~~**about**~~ 0.05 mg/day to ~~**about**~~ 5 mg/day.

46. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the PDE 4 inhibitor is administered **at** ~~**in**~~ a dose of ~~**about**~~ 10 mg/day to ~~**about**~~ 200 mg/day.

47. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the FSH is administered **at** ~~**in**~~ a **dose** ~~**dosage range**~~ of 5 IU FSH/day to 75 IU FSH/day.

48. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the FSH is administered **at** ~~**in**~~ a **dose** ~~**dosage**~~ of 150 IU FSH per day.

49. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the FSH is administered in a single dose.

50. (currently amended) **The method of claim 42** A method according to claim 42, wherein the FSH is administered in multiple doses.

51. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the FSH is administered intramuscularly or subcutaneously.

52. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the FSH is administered between day 2 and day 14 of the menstrual cycle of the female.

53. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the FSH is administered for 7 to 12 consecutive days.

54. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the method further comprises **suppressing** ~~**suppression**~~ of endogenous FSH and LH production in the female prior to administration of the PDE 4 inhibitor and the FSH hormone.

55. (currently amended) **The method of claim 54** ~~**A method according to claim 54**~~, wherein suppression of endogenous FSH and LH production is effected by the administration of GnRH or an analog thereof ~~**to the female**~~.

56. (currently amended) **The method of claim 54** ~~**A method according to claim 54**~~, wherein GnRH, or an analog thereof, is administered to the female for 30 days prior to the administration of ~~**the at least one**~~ PDE 4 inhibitor and the exogenous FSH hormone.

57. (currently amended) **The method of claim 55** ~~**A method according to claim 55**~~, wherein GnRH, or an analog thereof, is administered **at** ~~**in**~~ a **dose** ~~**dosage range**~~ of from ~~**about**~~ 0.25 mg to ~~**about**~~ 3 mg GnRH on a daily basis.

58. (currently amended) **The method of claim 42** ~~**A method according to claim 42**~~, wherein the female produces 4 or more oocytes that are harvestable.

59. (currently amended) **The method of claim 58** ~~**A method according to claim 58**~~, further comprising the step of harvesting the oocytes 12 days after the PDE 4 inhibitor and the FSH were first administered.

60. (currently amended) **The method of claim 59** ~~**A method according to claim 59**~~, further comprising the step of fertilizing the harvested oocytes in vitro, culturing the harvested, fertilized oocytes to the 4-8 cell stage, and transferring the 4-8 cell stage fertilized oocytes to the uterus of a female.

61. (currently amended) A kit for the treatment of infertility~~, the kit~~ comprising a first composition comprising at least one PDE 4 inhibitor in a pharmaceutically acceptable formulation, and a second composition comprising FSH in a pharmaceutically acceptable formulation.

62. (currently amended) **The kit of claim 61** ~~**A kit according to claim 61**~~, wherein the kit **further** comprises **a composition comprising** urinary FSH or recombinant FSH.

63. (currently amended) **The kit of claim 62** ~~**A kit according to claim 62**~~, wherein the kit comprises human FSH.

64. (currently amended) **The kit of claim 61** A kit according to claim 61, wherein the FSH ~~**of the kit**~~ is provided in a unit dose of between ~~**about**~~ 5 IU FSH and ~~**about**~~ 75 IU FSH.

65. (currently amended) **The kit of claim 61** ~~**A kit according to claim 61**~~ further comprising a ~~**third**~~ composition comprising LH in a pharmaceutically acceptable formulation.

66. (currently amended) **The kit of claim 65** ~~**A kit according to claim 65**~~, wherein the LH of the kit is provided in a unit dose of between ~~**about**~~ 75 IU LH and ~~**about**~~ 150 IU LH.